

ABSTRACT OF THE DISCLOSURE

A NO_x reduction method includes treating a first gas containing NO_x, producing a second gas containing NO₂, reducing a portion of the NO₂ in the second gas to N₂, and producing a third gas containing less NO_x than the first gas, substantially all of the third gas NO_x being NO. The method also includes treating the third gas, producing a fourth gas containing NO₂, reducing a portion of the NO₂ in the fourth gas to N₂, and producing a fifth gas containing less NO_x than the third gas, substantially all of the fifth gas NO_x being NO. Treating the first and/or third gas can include treatment with a plasma. Reducing a portion of the NO₂ in the second and/or fourth gas can include reducing with a catalyst. The method can further include controlling energy consumption of the plasmas independent of each other.